Consumers' purchase behavior reactions: a focus on the steady devaluation of currency, compounding increase in inflation rates in Egypt

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Abstract

Purpose – This study investigates consumer purchase behavior during the steady devaluation of currency, which led to increase in inflation rates in Egypt.

Design/methodology/approach – This study collected and analyzed numerical data to test the causal relationships found among the research model variables. Administrated questionnaires were distributed March 2023 in cross-sectional timeframe in several visits to hypermarkets, supermarkets and grocery stores in Cairo and Alexandria, applying nonprobability sample. Structure equation model path analysis was used to test the hypotheses.

Findings – This study shows compulsive buying, sense of anxiety, value shopping, attitude toward private label, attractiveness of local brands and materialistic behaviors impact consumers' acceptance of alternative brands; compulsive buying, sense of anxiety and materialistic behaviors impact the continuance of purchasing accustomed brands.

Practical implications – Retailers, government and policymakers can use this study as a guide to know how consumers react during times of high prices so to provide solutions to their needs. Policymakers should take into account the findings in managing the economy.

Originality/value – This study shows the effect of inflation on consumer spending to contribute to the body of knowledge in literature on the factors that influence consumer behaviors. A model was developed to frame the possible manners that might surface among consumers during times of high inflation; it reflected whether compulsive buying, sense of anxiety, value shopping, attitude toward private label, attractiveness of local brands and materialistic behaviors impact consumers acceptance of alternative brands and/or the continuance of purchasing accustomed brand.

Keywords Anxiety, Brand purchase, Brand switch, Compulsive buying, Consumer behavior, Inflation, Panic buying

Paper type Research paper

1. Introduction

In contemporary global market, inflation has become the primary element of economic, political and social discussions, gaining high media coverage and public attention (Trading Economics, 2023). Inflation is an inevitable occurrence worldwide and throughout history; it acts as a sign of a country's accompany development; nevertheless, inflation beyond a

certain limit can hurt a country's economy, increasing the cost of living and reducing citizens standard of living and purchasing power as a unit of currency buys less than it did before inflation (Patra and Sahu, 2012). Accordingly, inflation tends to redistribute income and wealth, especially after COVID-19 and the occurrence of the Ukraine and Russian war (Hubber, 2022; Trading Economics, 2023).

The inflation rate in Egypt accelerated to 31.9% in February 2023, from 25.8% in January 2023; this percentage exceeded the market expectations of 26.9%. During 2023, Egypt faced the hardest inflation level since August 2017 (CAPMAS, 2023). According to the global Trading Economics (2023), Egyptians are quick-fire due to series of devaluations of its currency in the recent months, which led to floorings out volatile commodities; for example, food prices rose 40.26% in February 2023 from the prior month. The Consumer Price Index (CPI) in Egypt assesses the fluctuations in the cost of a fixed basket of goods and services that are purchased by urban households; their measurements show that the percentage of price change in year 2023. The percentage of price change for food and beverages accounted for 40% of total weight; housing utilities (water, electricity, etc.) accounted for 18.4%; education accounted for 4.6%; medical care accounted for 6.3%; public transportation accounted for 5.7%; home appliance and furniture accounted for 3.8%; clothing accounted for 5.4% of total index. Correspondingly, existing research call for more studies to address updated insights on consumers' perception of alternative brand purchase, panic buying, buying out of fear, buying during product scarcity, buying with the view that upcoming price rise is to come, etc. (Burke and Ozdagli, 2021).

Price of products and services has been acknowledged by scholars and practitioners as a significant trigger to consumer behaviors; it plays an important role in value equation and consumer evaluation for purchases—aids in the determination to sacrifice the money for the benefits derived from the product or service (Monroe, 1971; Kotler *et al.*, 2022; Yuen *et al.*, 2022). Other scholars and practitioners have indicated that price has a significant influence on product and service image or market position, equity and purchase (Homburg *et al.*, 2005; Raewf *et al.*, 2021). Thus, price as an investigation topic in the field of marketing and consumer behavior has attracted plenty of research attention, resulting in a rich literature base (Solomon, 2020). However, existing studies have claimed that the relationship between increasing price and the demand for focal and routine product are not abundant in empirical evidence and insights and are debatable in conclusions (Yuen *et al.*, 2022). Irrespective of the reasons, scholars and practitioners concur that increase in price is not temporary anymore (Naughton and Trudell, 2012), and therefore, it is important to cognizant that increase in price can impact consumers, their demands and usage for products and services as well as the selection of alternative solutions (Hubber, 2022; Trading Economics, 2023).

Expectations among consumers exist that can rationalize the different behaviors found among consumers (Solomon, 2020). In terms of behavior changes in response to inflation, consumer behavior is not explicit in rationalization; scholars claim that a variety of behavioral outcomes can occur depending on the different individuals' personalities, mindsets, cultures, local market opportunities and other societal or contextual factors that exist (Burke and Ozdagli, 2021), making more studies yearn to comprehend the necessary initiatives and triggers to consumer behavior during high inflation (Bachmann *et al.*, 2012). Scholars claim that outcomes related to consumer behavior due to inflation escalation are not consistent in the current era, the post-COVID-19 era or the era of the Ukraine and Russian war (Yassin, 2022), pinpointing consumer behaviors are more dynamic and complex (Hubber, 2022). Some researchers concluded that when prices increase, consumers might then look for what's on sale, switching brands and products that they buy on a weekly bases as different things might be on sale at different periods (Omar *et al.*, 2021); some consumers might begin strategizing trading down brands, seeking to buy store brand and, therefore, sales of private label brands increase with inflation (Gartner, 2022); some consumers begin to prioritize their product

consumption and postpone purchasing certain product categories, stocking up on necessities and reducing the purchase of nonessentials (Burke and Ozdagli, 2021); some consumers do not change their brands or product and service consumption due to certain social factors and thus they choose to buy the same brands, but in smaller quantities (Samet and Gözde, 2021); and some consumers buy in larger quantities (bulk buying) the same brands or other alternative brands due to panic behaviors or that in the long run it is cheaper (Yuen *et al.*, 2022).

To address the research gaps, this study investigates the impact of consumer purchase behavior changes due to the steady devaluation of currency, which compounded the increase in inflation rates, on acceptance toward brand switching and toward remaining with usual purchased brands. Studies claim that increase in prices can trigger several consumer behaviors, altering consumption of the focal products and other directly or indirectly associated brands (Hubber, 2022). This study seeks to examine the rationalization of consumers based on the expectancy theory of consumer behavior by Vroom (1964), responding to research questions:

RQ1. Does compulsive buying significantly impact consumers to accept alternative brand or to continue with their accustomed brands?

RQ2. Does consumer anxiety significantly impact consumers to accept alternative brand or to continue with their accustomed brands?

RQ3. Does value shopping significantly impact consumers to accept alternative brand or to continue with their accustomed brands?

RQ4. Does private label significantly impact consumers to accept alternative brand or to continue with their accustomed brands?

RQ5a. Does local brands significantly impact consumers to accept alternative brand or to continue with their accustomed brands?

RQ5b. Does materialism significantly impact consumers to accept alternative brand or to continue with their accustomed brands?

A key contribution of this study is to shed some light on what consumers would feel and do when inflation is high, leading essential products with derived demand increase. This study provides some indication on why consumers consider trade-off when products' prices increase. In terms of implications, the findings can assist marketing managers that sell basket of goods and services to understand how consumers are currently reacting in this time of forceful and fluctuating product pricing; for public policymakers responsible for societal well-being, this study provides insights on consumers reaction of price increase, creating a "comprehensive mental account" (Thaler, 1999) that controls consumers' overall buying behaviors in the current and future times.

The following sections of this research present a review of the literature along with identification of key variables and the proposed hypotheses related to how inflation remains on the top of mind for consumers, making them trigger attitude, behaviors and consider alternatives. The next section clarifies the research methods for the investigation. The subsequent sections are the research analysis, findings, discussions, implications, limitations and recommendations for future studies.

2. Literature review
Trading Economics (2023) stated that Egypt for years enforced currency stability to preserves the purchasing power of the nation's money; the stable currency allowed citizens to purchase products without having to worry that inflation will reduce the real value of their money balances. However, currently, the nation is steady devaluating the currency, leading to

high inflation rates, reflecting the overall escalation in prices (prices of various products and services surges) and/or the rise in the living cost of a country (Burke and Ozdagli, 2021). Valášková and Klieštik (2015) claim that when economic crisis transpires in a society, it can seriously affect consumer behavior and their purchase decisions. Nevertheless, studies have indicated that consumer behavior has been unpredictably adaptive in response to inflation (Burke and Ozdagli, 2021). Existing studies pinpointed that during difficult times faced in the market, some consumers might switch to cheaper alternatives and/or discontinue spending on items deemed nonessential; change preferences, moving around where they shop (Samet and Gözde, 2021); in the short run, it can increase the quantity of consumer current purchases, or purchase the same products with smaller quantities (Yuen *et al.*, 2022). The next sections explain prior studies that can rationalize and predict consumer behaviors and reactions during precipitous high product pricings.

2.1 Expectancy theory of motivation: consumer behavior

Consumer behavior theories are set to provide some basic directions and conclusions about how consumers may behave, especially when seeking to purchase products (Solomon, 2020). Researchers claim that when it comes to the study of consumer behavior, scholars and practitioners lack consensus on what are the significant influential determinants that are significant to guide people's purchase behaviors or how the determinants are interrelated (Valášková and Klieštik, 2015). So, in this study, the expectancy theory of consumer behavior by V. H. Vroom in 1960s is used to underline particular influences on consumers and rationalize consumer purchasing behavior during periods of emergencies; as Vroom (1964) claim consumers hold set of ideas, thoughts and beliefs on products, services and/or brands in their mind, guiding their purchasing.

Vroom (1964) explains that consumers' motivation is the main source that governs their buying behavior choices among alternative forms of available products, services and other procurement accomplishments. Motivation is the reason for which individuals initiate, continue, revive, pause or terminate a behavior at a given time (Solomon, 2020). According to Gartner (2022), motivational states are known as mental forces acting within the individuals that create a disposition to engage in goal-directed behavior; different mental states can emerge at the same time, but only the strongest state determines behavior selection.

According to the expectancy theory of motivation, consumer behavior is a cognitive process: "mental action or process of acquiring knowledge and understanding through thought, experience, and the senses" (Lexico, 2023, p. 1). Scholars claim that cognition is a form of human computation (mental operations the brain performs to process information), viewing the mind as a machine and consciousness as an executive function; so, the brain interacts with the information around it, stores it and analyzes it to make the relevant decisions (Valášková and Klieštik, 2015).
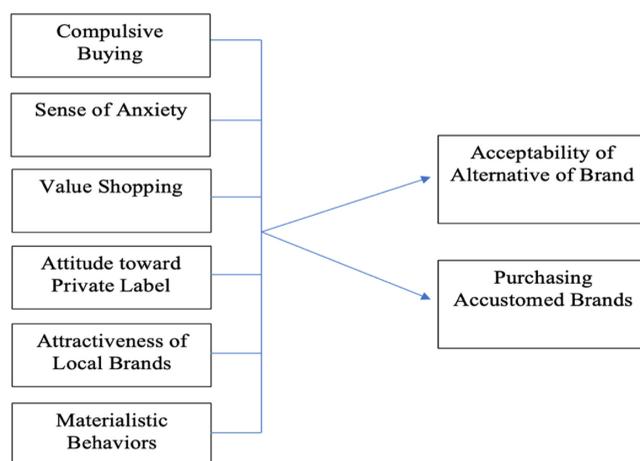
The expectancy theory claim that consumers make choices based on assumptions, which were calculated and assessed regarding how well the expected consequences of a given product/brand are going to match up with or eventually lead to the desired results that they wish to achieve (Solomon, 2020). Vroom (1964) highlights that behavior choice (why individuals choose one brand/product option over the other) reflects their movement toward a specific aspiration; if the consumer believes that there is a positive correlation, the product/brand will result in a desirable reward, and this reward will satisfy an important need, and/or the outcome satisfies their need enough to make the effort worthwhile.

Based on the expectancy theory, scholars have clarified numerous expectations that describe consumer purchase during times of inflation. Hubber (2022) mentions that when prices of products soar, fear and anxiety can be an adaptive response, leading to psychological or irrational purchasing. Yuen *et al.* (2022) explain that during times of market

uncertainty and economic turmoil, consumers usually seek to buy: "enormous quantities of a specific product or commodity owing to unanticipated worries of a prospective shortage or price spike" (p. 1029); owning a good number of products lead to the expectation of contentment, echoing satisfaction/happiness/utility. Arafat *et al*. (2020) claim that consumers expect to purchase products to be secure and hold reserves so to remain calm during economic emergency. Burke and Ozdagli (2021), Srivastava *et al*. (2021) and Gartner (2022) claim that consumers are value-based shoppers; consumers will expect to buy products and brands that suit their budgets and would exclude certain products and brands that is out of budgets; so, they might consider the attractiveness of local and private label brands. Lussier and Achua (2007) contradict this assumption, stating that people may buy products, expecting acquisitive purposes: "need for achievement, power, and affiliation" (p. 42); hence, they hold materialistic tendencies regardless of their financial situation.

In conclusion, many scholars exist to explain expectations that consumers might hold to justify why consumers behave a certain way. These expectations can be used to rationalize consumer purchasing behavior during periods of emergencies. These expectations hint different justifications that influence the purchase of specific products over another, which is assessed in this study. This study developed a proposed research model (Figure 1) that illustrates the possible manners that might surface among consumers when purchasing products during times of high inflation, impacting whether they would accept alternative brands and/or continue purchasing their accustomed brands. The succeeding section rationalizes the selection of variables according to findings of prior studies.

2.1.1 Compulsive buying. Early, Brock and Franklin (1968) indicated that inflation allows any product to be valued to the consumer until it is unavailable or unachievable to purchase; thus, consumers seek to buy as much as possible the products that they desire as they still hold freedom of choice between products. This compulsive behavior among consumers is known as panic buying; it has been commonly practiced during various times of emergency, such as epidemics, financial crisis or natural disasters (Arafat *et al.*, 2020). During times of panic, individuals perceive an item to be limited or that there is a chance that the price might increase further in the future; thus, they become motivated to buy the item now (instead of later) due to its availability and coherent price; they seek to buy the brands that they are accustomed to or if there are other alternatives that are attractive to the consumers

Source(s): The current research

(Yuen *et al.*, 2022). These people get hooked through use of addictive commodities, simultaneously wanting to consume and to avoid it. Burke and Ozdagli (2021) claim that people compulsively buy (buy great quantities) out of worry of not being able to get them in the future; fear of insecurity over what they can and cannot buy is the expectancy that drives behavior. Thus, it is hypothesized:

H1a. Compulsive buying significantly impacts accepting alternative brand.

H1b. Compulsive buying significantly impacts purchasing accustomed brands.

2.1.2 Sense of anxiety. According to Weber–Fechner law of psychophysics, consumers do not respond to changes in prices below a certain threshold level; nevertheless, consumers respond to increase in price that are excessive and above the threshold level (Monroe, 1971). Early and recent studies claim that when consumers are aware that there is a chance that product prices will further increase in the future, they seeming sense negative emotions, such as anxiety (Yuen *et al.*, 2022). Consumers face anxiety due to: "suspense, tension and apprehension arising from a diffused sense of threat" (Lee *et al.*, 2011, p. 344). Thus, physiological tension, deficiency or imbalance will emerge pressing for consumers to take action to buy various products and brands; they seek to buy the necessary products and brands that they expect will reduce the negative feeling (Solomon, 2020). Omar *et al.* (2021) indicate that when consumers notice change in product prices (especially an increase), they will feel anxious, which, in turn, will motivate them to do something about it, either accepting trading down brands or buy smaller quantities. Hence, it is hypothesized:

H2a. Consumer anxiety significantly impacts accepting alternative brand.

H2b. Consumer anxiety significantly impacts purchasing accustomed brands.

2.1.3 Value shopping (rewards and discounts). Burke and Ozdagli (2021) claim that comparing prices and planning a list ahead of shopping can offer the most significant time and money savings to the consumer, especially when consumers search for products that hold value. Gartner (2022) explain that regardless of the economic environment, consumers will continue to shop; but in challenging financial times, such as in high inflation, they will change their buying habits. This change in habit can take on many forms; for example, some consumers might consider to buy other brands instead of more expensive options (Burke and Ozdagli, 2021). During the times of high inflation, rewards and other incentives are a significant factor, influencing consumers' purchasing behavior; value (availability of rewards and incentives) that are offered to consumers positively affects consumer behavior at the top of the purchase funnel (awareness and consideration) and the bottom (completing a purchase); with value offerings, the products and brands are placed above the indifference curve, making consumers satisfied and seeking to buy and consume (Solomon, 2020). Rondinelli and Zizza (2020) claim that offering a reward is powerful enough to impact consumers' behavior even before they decide where to shop and what to buy. Gomez *et al.* (2004) pinpoint that value (availability of rewards and incentives) impacts consumers' purchase decisions, driving sales conversion rates; consumers are more likely to complete a purchase when they can earn financial rewards (Gartner, 2022). This study expects that consumers' propensity for searching out discounts exist; so, it is hypothesized:

H3a. Value shopping significantly impacts accepting alternative brand.

H3b. Value shopping significantly impacts purchasing accustomed brands.

2.1.4 Attitude toward private label. The turbulent environment encourages the consumers to look for new ways to satisfy their consumption needs (Burke and Ozdagli, 2021). Inflation, economic crises and low living standard cause consumers to become more sensitive to prices,

and they began to show interest in private brands, supporting the economists' theories (Ailawadi *et al*., 2001). Private (store brands, retailer brands, own brands) labels are brands of retailers and distributors sold only in their chains (Garretson *et al*., 2002). According to Siohong and Heng (2013), many consumers seek to buy private label products in the presence of the huge variety of products in the respective category due to better price; private label brands are generally considered as a cheap and modest alternative (low-priced alternative) to premium branded products. Primarily, private label was produced for low-income and price-sensitive consumers; currently, many categories of consumers are considering to purchase these products as these brands are owned by popular retailers that hold reputations and huge market share (Ailawadi *et al*., 2001). Literature state that private labels brands constantly study consumer demand and perception so to be able to create products that can be substitutes to well-known national brands; subsequently, private label brands offer consumers products of equal quality as well-known national brand products; the product quality gap has narrowed down (Muszyńska, 2019). De Wulf *et al*. (2005) and Gartner (2022) claim that price is key attraction to consumers strategy; e.g., in the fast-moving consumer good industry, Carrefour market's private label brand, OnePlus, holds notable global sales. Thus, it is hypothesized:

H4a. Attitude to private label significantly impacts accepting alternative brand.

H4b. Attitude to private label significantly impacts purchasing accustomed brands.

2.1.5 Attractiveness toward local brands (competitors). Researchers claim that in developing regions, many consumers perceive international brands as offering products of quality and excellence; this perception surfaced among consumers just because of the brands' global availability (Srivastava *et al*., 2021). Studies state that consumers perceive international brands as a source to upgrade themselves; consumers would purchase universal brands to transfer brand qualities to themselves; this gives global brands the upper hand over local brands, supporting consumers need for achievement, power and affiliation as stated in the expectancy theory (Diamantopoulos *et al*., 2019). With these benefits among global brands, consumers justify its high prices (He and Wang, 2017). Studies state that consumers perceive local brands as stagnant, less exciting, elementary and hold fewer options than global brands (Srivastava *et al*., 2021). Nevertheless, recent studies have contradicted this outcome, claiming a transformation in consumer behavior and consumption with domestic brands (locally grown and processed products) rapidly substituting global brands, especially when inflation is high (Xinglong and Antwi, 2022). Studies show that domestic brands are improving quality and producing products of universal appeal and inspiration to be able to compete with global alternatives (Srivastava *et al*., 2021); therefore, when consumers are in budget, local brands might be of preferred choice as their attribute, performance and presentation improved, forming high expectancy among consumers. Many local brands exist in Egypt in all fields; e.g., Elaraby Group is an Egyptian brand in home appliances; Egypt's indigenous fast-moving consumer goods brand subsist, such as Faragalla, Corona, Juhayna, El Rashidi El Mizan, etc.; in fashion, Mobaco, Rojada and Palma are some example of Egyptian-owned and operated businesses. Thus, it is hypothesized:

H5a. Attractiveness of local brands significantly impacts accepting alternative brand.

H5b. Attractiveness of local brands significantly impacts purchasing accustomed brands.

2.1.6 Materialistic behavior. Income inequalities have increased worldwide in recent years (Alvaredo *et al*., 2018). Previous studies have shown a negative consequence of income inequality to be the increase in materialistic behavior among poorer people (Górnik-Durose, 2020). Materialism reflects: "the importance a person places on possessions and their

acquisition as a necessary or desirable form of conduct to reach desired end states, including happiness" (Richins and Dawson, 1992, p. 307). In literature, studies have hinted that people develop materialistic behavior as they desire to compensate for economic deprivation (Maison, 2019). Although the purchasing power of all consumers is restricted to some extent and the power is reduced due to high inflation, some consumers that are financial wounded are more likely to experience negative emotions (such as anger and anxiety), which translate into low self-esteem; therefore, they seek to engage in ostentatious consumption or pursue products that act as symbols of wealth to secure their low self-esteem (Zhang and Hawk, 2019). Other studies have provided empirical evidence illustrating that consumers' materialistic behaviors increase when they experience personal relative deprivation (Kim *et al.*, 2017). The idea that economic deprivation leads to materialistic tendencies is supported many times in literature across nations, showing people are dependent on the acquisition of various brands beyond their financial reach (Li *et al.*, 2018; Maison, 2019; Górnik-Durose, 2020). Materialistic consumers are motivated to purchase brands that are to provide them with extra recognition and rewarded, supporting the expectancy theory. So, it is hypothesized:

H6a. Materialistic behavior significantly impacts accepting alternative brand.

H6b. Materialistic behavior significantly impacts purchasing accustomed brands.

3. Research design

This quantitative research sought to collect and analyze numerical data so to be able to make predictions and test the causal relationships that exist between the variables in each hypothesis, generalizing the results to wider populations. Thus, this study used deductive reasoning, opening the study with a general statement to prove it with a logical specific conclusion.

Data were collected through the use of administrated questionnaires. The questionnaire consisted of three main sections. Section 1 reflected the ethical procedures of scientific research. The section contained a description of the research topic and the requirements to participate in the study so to appropriately inform the respondents about the research and promote transparency of the research purpose. The section also included confirmation that the participation of this study is voluntary and the respondents can withdraw at any time of the study when desired. The section also verified that the respondents' identity would be anonymous and their replies confidential. Section 2 of the questionnaire asked various questions about the respondents' sociodemographic traits and their behaviors toward shopping these days during high inflation. The final section in the questionnaire assessed the variables under study: compulsive buying, sense of anxiety, value shopping, attitude toward private labeling, attractiveness of competitors, materialistic behaviors, acceptability of alternatives and purchasing accustomed brands. These variables were measured in the questionnaire through five-point Likert-scales, having the scale range from point 1 (equivalent to strongly disagree) to point 5 (equivalents to strongly agree).

The scales in this study came from different past researchers and modified to fit the current research topic. These scales were chosen as past studies claimed they held high reliability and validity above 0.8. The variable compulsive buying was taken from Roberts *et al.* (2003); the variable sense of anxiety was taken from Lovibond and Lovibond (1995); the variable value shopping was taken from Arnold and Kristy (2003); the variable attitude toward private label was taken from Garretson *et al.* (2002); the variable attractiveness of local brands was taken from Bansal *et al.* (2004); the variable materialistic behavior was taken from Bloch *et al.* (2003); the variable acceptability of alternative was taken from Patterson and

Tasman (2003); and the variable purchasing accustomed brands was taken from Raju (1980). Table 5 illustrates the items in each scale and the reliability and validity analyses results that were conducted in this study.

The questionnaire was created in both the Arabic and English language through the process of back translation, also known as reverse translation. Back translation aided the researcher to check and confirm that the overall quality of the Arabic questionnaire (a once completed translation) contained the same meaning as the original English questionnaire—to spot potential differences in the meaning between the source and target text so to adjust the meaning in coherence. A pilot test took place before the actual data collection; 50 questionnaires were conducted as a rehearsal to test the research instrument for any mistakes before the researcher conducted the main study.

Existing research in the literature found that higher-income households are on tightening-of-belts pursuit of value as lower-earning households; wholesale retails are attracting more middle- and high-income shoppers, concluding that inflation-strapped shoppers are considering changing their buying behaviors—trading down in quality and quantity (Burke and Ozdagli, 2021; Gartner, 2022). Thus, this study population was middle- and high-income shoppers.

The researcher for a month (March 2023) visited several hypermarkets, supermarkets and grocery stores in Cairo and Alexandria (the two largest populated cities in Egypt). With permission from store managers, the researcher approached consumers in the stores and asked them if they would like to participate in a study; those who agreed were given a questionnaire to fill. This is considered nonprobability sampling as the researcher selected potential respondents from the population subjectively; the researcher selected those who were easy to contact and to reach during the site visit. This sampling is known as convenience sample or grab sampling or availability sampling.

Sample size is the number of subjects needed in a study so to be able to generalize the conclusions on the whole population (Krejcie and Morgan, 1970). A suitable maximum sample size is customarily around 10% of the population, as long as the number does not exceed 1000. For a population of 200,000 and above, then 384 sample size is adequate (Small-Sample Techniques, 1960); thus, the researcher sought to achieve this target sample size. Once the needed data were gained, statistical analysis was conducted through IBM SPSS 20 IBM SPSS Amos 16 to summarize the portfolio of the respondent, to analyze the consumer behavior during the high inflation period and to test the research model and hypotheses. The path analysis structure equation model was used to test the hypotheses as the research seeks to explore the correlations among the variables in the research model. Thus, it aided the researcher to measure which of the possible relationships matter the most and which might turn out to be not important at all.

4. Research findings
This study distributed 680 questionnaires, but only 500 questionnaires were used as they were properly completed, making this study obtain response rate of 74%. Based on the frequency analysis, the respondents held different sociodemographic backgrounds (as shown in Table 1).

4.1 Respondents' buying behavior descriptive statistics (frequency analysis)
Several nominal questions were asked to the respondents to evaluate their buying behavior during the high inflation that has been witnessed during the beginning of January 2023. When asking the respondents, in their opinion, how, if at all, will inflation or current price increase impact their purchasing habit over the next few months, 94% of the respondents
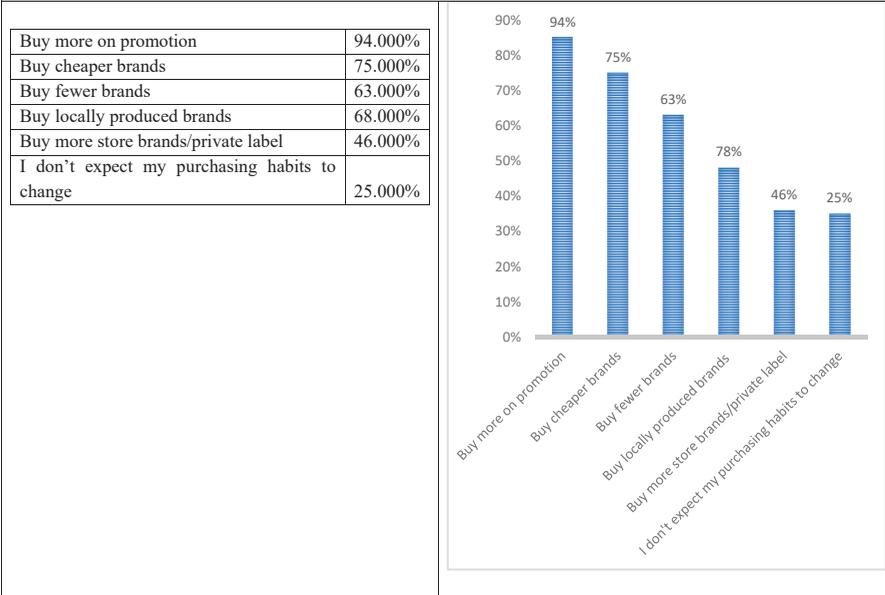
Item	Category	Frequency	%	Item	Category	Frequency	%
Age	19–29	50	10.000%	Monthly average household income *Egyptian pound*	Less than 5,000	150	30.000%
	30–39	275	55.000%		5,000 to less than 15,000	225	45.000%
	40–49	100	20.000%		15,000 to less than 25,000	75	15.000%
	50–59	70	14.000%		Over 25,000	50	10.000%
	60–69	5	01.000%				
	70 or more	0	0.000%				
Gender	Female	330	66.000%	Occupation	Employee	400	80.000%
	Male	170	34.000%		Retired	75	15.000%
					Unemployed	25	05.000%

Source(s): The current research analysis outcomes

mentioned that they would buy more on promotion; 75% of the respondents mentioned that they would buy cheaper brands; 63% of the respondents mentioned that they would buy fewer brands; 78% of the respondents mentioned that they would buy locally produced products; 46% of the respondents mentioned that they would buy more store brands/private labels; 25% of the respondents mentioned that they do not expect their purchasing to change. Table 2 and Figure 2 show the results.

How, if at all, will inflation or current price increase impact your purchase habit over the next few months?

Buy more on promotion	94.000%
Buy cheaper brands	75.000%
Buy fewer brands	63.000%
Buy locally produced brands	68.000%
Buy more store brands/private label	46.000%
I don't expect my purchasing habits to change	25.000%

Source(s): The current research analysis outcomes

When asking the respondents, in their opinion, thinking about the prices they have paid for the following products in recent weeks, they all consented that almost all product categories increased significantly since the start of the year. The believed that the prices rose for the following items: total grocery bill (100% of the respondents believe so), gasoline (70% of the respondents believe so), meat (100% of the respondents believe so), dairy (75% of the respondents believe so), fresh fruits and vegetable (70% of the respondents believe so), food at restaurants (65% of the respondents believe so), cleaning/laundry products (53% of the respondents believe so), paper products (48% of the respondents believe so), clothing (86% of the respondents believe so), electricity (83%) of the respondents believe so, entertainment (42% of the respondents believe so), total household expenses (rent/mortgage, utilities) (29% of the respondents believe so) and health personal care products (30% of the respondents believe so). Table 3 and Figure 3 show the results.

When asking the respondents, thinking specifically about their purchasing habits this Ramadan season (including gift buying, celebrations, entertaining, decorating and cooking/baking), which activities are you behaving more of this year than in typical years, specifically because of inflation, they mentioned that they cooked more at home/dined out less (92%), cooked less for guests (61%), bought fewer items this holiday (68%), shopped more at local markets/wholesale markets (74%), shopped for deals more than usual (89%), scaled back gift giving (92%), brought cheaper brands/items (87%), brought things early or stocked up in case prices went up (89%), scaled back family celebrations (76%) and scaled back entertaining (70%). The highest percentage (93%) states that they will stock up in case of scarcity in the future. Table 4 and Figure 4 show the results.

Thinking about the prices you have paid for the following products in recent weeks, do they generally seem higher, lower, or about the same as in the start of the year?
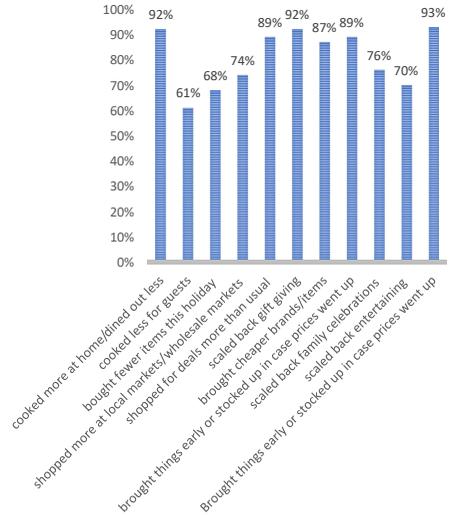
Total grocery bill	100.000%
Gasoline	70.000%
Meat	100.000%
Dairy	75.000%
Fresh Fruits and Vegetable	70.000%
Food at restaurants	65.000%
Cleaning/ Laundry products	53.000%
Paper Products	48.000%
Clothing	86.000%
Electricity	83.000%
Entertainment	42.000%
Household expense (rent/mortgage, utilities)	29.000%

Source(s): The current research analysis outcomes

Table 3 and
Figure 3.
Consumer notice of
price increase

Table 4 and
Figure 4.
Consumer behavior
during 2023 Ramadan

Thinking specifically about your purchasing habits this Ramadan season (including gift buying, celebrations, entertaining, decorating, and cooking/baking), which of the below did you do more of this year than in typical years, specifically because of inflation?

Cooked more at home/ dined out less	92.000%
Cooked less for guests	61.000%
Bought fewer items this holiday	68.000%
Shopped more at local markets	74.000%
Shopped for deals more than usual	89.000%
Scaled back gift giving	92.000%
Brought cheaper brands/items	87.000%
Brought things early or stocked up in case prices went up	89.000%
Scaled back family celebrations	76.000%
Scaled back entertaining	70.000%
Brought things early or stocked up in case of scarcity in the future	92.000%
My behavior did not change	13.000%

Source(s): The Current Research Analysis Outcomes

4.2 Reliability and validity analysis

In order to check the accuracy of the scale used in order to get the necessary data to assess the research hypothesis, the researcher conducted several reliability and validity analysis: factor loading, AVE% and Cronbach alpha. The reliability analysis assesses the properties of measurement scales and the items that compose the scales. In this study, Cronbach alpha is sought. According to scholars, the values of Cronbach alpha must be between 0.60 and 0.70 so to be acceptable, to indicate strong internal consistency across constructs (Hair *et al.*, 2014). In this study, the Cronbach alpha (standardized item) for all variables varied from a range of 0.700–0.943 (alpha of more than 0.7), which indicate the scale structure is reliable (as shown in Table 2).

Validity analysis assesses how accurately the scale measures what it is intended to measure. In this study, factor loading is conducted to illustrate the correlation between the item and the factor; a factor loading of more than 0.30 usually indicates a moderate correlation between the item and the factor (Hair *et al.*, 2014). The average variance extracted (AVE) is also conducted as an additional measure of construct validity. The extracted average rate variance measures how well a latent construct explains the variation in its indicators; all the AVE should be above 0.50 to indicate strong convergent validity or larger than the squared correlations with other constructs (Hair *et al.*, 2014). In this study, the analysis shows that factor loading and the AVE are all above 0.5, indicating that the discriminant validity was achieved as shown in Table 5.

Variables		F.L.	AVE %	α	Variables		F.L.	AVE %	α
Compulsive	CB1	0.826	79.235	0.934	Attitude toward	PL1	0.871	78.634	0.863
buying	CB2	0.843			private label	PL2	0.748		
	CB3	0.735				PL3	0.747		
	CB4	0.779				PL4	0.799		
	CB5	0.779				PL5	0.771		
	CB6	0.794				PL6	0.846		
Sense of anxiety	SA1	0.778	82.524	0.894	Materialistic	MB1	0.791	72.720	0.810
	SA2	0.875			behavior	MB2	0.802		
	SA3	0.794				MB3	0.704		
	SA4	0.793				MB4	0.746		
	SA5	0.778				MB5	0.745		
	SA6	0.794				MB6	0.774		
Attractiveness of	LB1	0.791	64.049	0.858	Purchasing	ACC1	0.570	64.049	0.858
local brands	LB2	0.802			accustomed	ACC2	0.643		
	LB3	0.704			brands	ACC3	0.674		
	LB4	0.746				ACC4	0.674		
	LB5	0.745				ACC5	0.641		
Value shopping	VS1	0.747	72.520	0.804	Acceptability of	ALT1	0.791	76.070	0.895
	VS2	0.660			alternative	ALT2	0.802		
	VS3	0.769				ALT3	0.704		
						ALT4	0.746		

Source(s): The current research analysis outcomes

Table 5.
Reliability and validity
analysis

4.3 Hypotheses testing
SEM is employed in testing the hypotheses. The structural model analysis was conducted first to examine the structural connection between the constructs and the suggested hypotheses and the overall model that represents the summation of scale indicators. Confirmatory factor analysis (CFA) was used to illustrate a confident expectation regarding the design of the data obtained; several indices were examined (Hair *et al.*, 2016). These indicators were minimum discrepancy or chi-square divided by the degrees of freedom (CMIN/DF), goodness of fit (GFI), adjusted goodness of fit index (AGFI), the Bentler–Bonett normed fit index (NFI), Tucker–Lewis index or Bentler–Bonett non-normed fit index (TLI), the comparative fit index (CFI) and root mean square residual (RMR). In this study, the analyses showed (CMIN/DF) was 2.334, (GFI) was 0.952, (AGFI) was 0.928, (NFI) was 0.976, (TLI) was 0.941, (CFI) was 0.952 and (RMR) was 0.070. These numbers indicated appropriate model fit indicators according to Hair *et al.* (2016) reference.

The study's hypotheses were tested using path analysis of SEM; an equation system (series of regressions applied sequentially to data) used to test causal relationships between two or more variables. Table 6 shows the outcomes of the path coefficient, which clarified that: compulsive buying, sense of anxiety, value shopping, attitude toward private label, attractiveness of local brands and materialistic behaviors impact consumers' acceptance of alternative brands; nevertheless, compulsive buying, sense of anxiety and materialistic behaviors impact the continuance of accustomed brand purchase.

5. Research conclusion
This study assumed that due to the steady devaluation of currency, which compounded the increase in inflation rates, consumers could initiate compulsive buying, sense of anxiety, value shopping, attitude toward private label, sense of local brand attractiveness and materialism. This study showed that due to inflation, consumers are more worried and

Hypotheses			Estimate	P	Hypothesis outcome
H1a Compulsive buying	→	ALT	0.078	***	Supported
H2a Sense of anxiety	→	ALT	0.283	***	Supported
H3a Value shopping	→	ALT	0.937	***	Supported
H4a Attitude toward private label	→	ALT	0.042	***	Supported
H5a Attractiveness of local brands	→	ALT	0.032	***	Supported
H6a Materialistic behaviors	→	ALT	0.255	***	Supported
H1b Compulsive buying	→	ACC	0.243	***	Supported
H2b Sense of anxiety	→	ACC	0.939	***	Supported
H3b Value shopping	→	ACC	0.319	0.189	Not supported
H4b Attitude toward private label	→	ACC	−0.236	0.379	Not supported
H5b Attractiveness of local brands	→	ACC	−0.098	0.297	Not-supported
H6b Materialistic behaviors	→	ACC	0.042	***	Supported

Note(s): ALT reflects alternative brands purchase
ACC reflects accustomed brand purchase
*** reflects hypothesis is significant
Source(s): The current research analysis outcomes

Table 6.
Hypothesis testing

anxious, which further results in the change in their normal lifestyle. This study found that 94% of the respondents would buy more on promotion; 75% of the respondents would buy cheaper brands; 63% of the respondents would buy fewer brands; 78% of the respondents would buy locally produced products; 46% of the respondents would buy more store brands/private labels; 25% of the respondents do not expect their purchases to change. Based on the hypotheses testing, compulsive buying, sense of anxiety, value shopping, attitude toward private label, attractiveness of local brands and materialistic behaviors impact consumers' acceptance of alternative brands; compulsive buying, sense of anxiety and materialistic behaviors impact the continuance of accustomed brand purchase. Thus, during times of inflation, some consumers can be rational in behaviors, but other consumers can be highly illogical, random, emotional and impulsive.

6. Research discussion
The results of this study have significances regarding the development of insights on consumers' expectancy and purchasing behavior during high inflation on both a theoretical and practical level. This study shows that consumers are reducing their discretionary expenditure by eating out less, purchasing more private label and local products, and shopping across stores to get the best values and deals. According to Gartner (2022), during recession, there is average drop in every given product category, implying that consumers are accepting to survive without high-priced brands; consumers are looking for brands that correspond with them during times of financial crisis.

The current research offers an extended scope for further study with relevance to consumption of essential product categories during times of high inflation. This study adds to literature with empirical evidence that during high inflation, consumers have expectations and an incontrollable urge to buy due to worry of not being able to obtain them in the future or due to the perception of scarcity. This outcome supports Arafat *et al.* (2020) and Yuen *et al.*'s (2022) claim that during times of turmoil, panic buying starts to occur as consumers perceive the future with uncertainty and volatility. This study adds to the literature by developing empirical evidence that consumers' sense of anxiety (experiencing negative physiological and emotional moods) impacts their purchase behaviors, supporting the studies of Burke and Ozdagli (2021), Omar *et al.* (2021) and Gartner (2022); they claim that a significant change in prices leads people to feel anxious, motivating them to either accepting trading down brands

or buy in smaller quantities. Those who usually buy in small quantities seek to buy their accustomed brands that they use strenuously; they grew attached to the brand for expected quality level and experience that the brands offer overtime.

This study develops empirical evidence that shows consumers, during times of inflation, will consider private distributor brands; it captures consumers' view of the general quality level of private brands as well as provide consumers' tendency to buy them or not. In addition, this study shows that when consumers expect that local brands/competitors could do an equal or even better job than their current purchased brand, then they can consider to purchase the products. In addition, this study's result implies that consumers' attitude regarding the prices of products and the value offer by particular grocery stores can aid their switching of brands. These findings act as supporting insights to several existing research. For example, Gartner (2022) and Yuen *et al.*'s (2022) research explain that regardless of the economic predicament, consumers will continue to shop but will change their buying habits as they become more sensitive to prices. Burke and Ozdagli (2021) claim that turbulent environment encourages consumers to show interest in and/or look for new brands, products and services to satisfy their consumption needs.

This study adds to the literature, indicating that people develop materialistic behavior as they desire to compensate for economic deprivation; those high in proneness to materialism can affect the consumers' allocation of resources. This study shows that materialistic behaviors does increase consumption, whether to alternative brands or toward the accustomed brands. Lee and Ahn's (2016) research support this premise as their research showed that consumers with high materialistic principles have lower control over their consumption; materialistic behaviors lead to favorable attitudes toward spending and borrowing, therefore affecting their individual financial management level. According to Garðarsdottir and Dittmar (2012), this behavior during inflation is positive to the community as it holds a positive impact on the economy because it encourages people to work more, thus have more incomes and greater consumption.

It is the collective responsibility of various stakeholders to involve themselves in aiding consumers to adapt and control their behaviors during inflation as it can result in economic growth and prosperity of the nation. The presented conclusions of this research could be used by policymakers and government as guidelines for developing educational plans and curriculum to build financial capability and consumer protection among citizens during the devaluation of currency, which compounded the increase in inflation rates. It is vital to educate consumers about the crisis outcome and how to consume safely during it. It is vital to utter reassurance among citizens that the market has their basic needs of product covered, especially as people usually look for ensuring messages during predicaments. Tariff reductions can take place to keep product prices under control to a certain extent; controlling prices can strengthen domestic public products distribution.

The conclusions can be helpful for marketers and brand management in charge of activities targeting citizens purchase decisions. Businesses must plan for the future to deal with customers undergoing significant psychological shifts; businesses must consider and monitor the different behaviors and psychological mindset that exist based on crisis responses. Many consumers are considering alternative brands that might be more reasonable than the accustomed products that they purchase. Thus, companies, marketers, retailers and policy makers need to look at the specific category of products that they offer or operate in, and depending on what they find, they should respond to inflation in different ways. For example, if companies generally have premium brands; if the premium brands become less purchased, they are recommended to introduce lower tier (private label brands) or a value brand. Nevertheless, companies can seek to charge the same price and offer a

slightly lower quantity or quality. For example, one kilo of rice becomes 900 g or the package of toilet paper have fewer rolls; effectively, because it is at the same price and quantity changes are harder to perceive, consumers don't notice it as much.

7. Research limitation and suggestion for future studies

This study faces several research limitations. This study used quantitative research approach, neglecting qualitative data so to be able to address the "how" and "why" insights of the consumer purchase behavior during inflation to enable deeper understanding of the context. Thus, future studies are suggested to conduct the research topic in a qualitative form to further investigate and understand the quantitative results of this study. Future studies can interview practitioners to grasp the needed action plan to handle the inflation rate of products. This study assessed inflation in general, the fluctuations in the cost of the fixed basket of goods and services, which reflects the overall escalation in prices and/or the rise in the living cost of the country. Future studies can use the research model in different categories of product (the rise in prices of gasoline, grocery bills, electricity, fashion, etc.) and/or do a comparison study between different products and the changes in consumer behavior towards. This cross-sectional research was conducted in the early month of the start of the high inflation, making the outcomes limited to the surprise occurrence of inflation. Future studies can conduct a longitudinal study to employ continuous or repeated measures to follow consumer behavior during inflation over prolonged periods of time. Researchers can look at how consumers' reaction to high prices may change at different points in time and explore some of the reasons why these developmental shifts take place.

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